Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Big Cajun I Power Plant
Louisiana Generating, LLC
Jarreau, Pointe Coupee Parish, Louisiana
Agency Interest Number: 11917
Activity Number: PER20040001, PER20040002, PER20040003
Draft Permits 2260-00007-V1, PSD-LA-660(M-1), 2260-00007-IV1

I. APPLICANT

Company:
Louisiana Generating, LLC
112 Telly Street, New Roads, LA 70760

Facility:
Big Cajun I Power Plant
7807 River Road, Jarreau, Pointe Coupee Parish, Louisiana
Approximate UTM coordinates are 657.56 kilometers East and 3394.41 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS

Louisiana Generating, LLC (LaGen), a subsidiary of NRG Energy, Inc., operates the Big Cajun 1 Power Plant near New Roads, Louisiana, in Pointe Coupee Parish. Big Cajun 1 Power Plant, an existing electric power generation facility, began operation in 1972. The Big Cajun 1 Power Plant currently operates under Permit Nos. 2260-00007-V0 and PSD-LA-660, issued December 8, 2000; as well as Permit No. 2260-00007-IV0, issued March 2, 2001.

The Big Cajun 1 Power Plant (Steam) is a designated Part 70 source. An initial Part 70 permits has been issued to the sources within the power plant. These sources include:

Permit No.	Unit or Source	Date Issued
2260-00007-V0	1B1 – Boiler No. 1 1B2 – Boiler No. 2 CTG-1 – Combustion Turbine No. 1 CTG-2 – Combustion Turbine No. 2 CT1 – Cooling Tower No. 1 CT2 – Cooling Tower No. 2 T1 – No. 2 Fuel Oil Storage Tank	December 8, 2000

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Permit No.	Unit or Source	Date Issued
	T2 - No. 2 Fuel Oil Storage Tank T3 - Gasoline Storage Tank T4 - Condensate Storage Tank T5 - Gasoline Storage Tank FWP – Firewater Pump Engine *Gen – Emergency Generator* FUG1 – Fugitive Emissions	

In addition, PSD Permit PSD-LA-660, (December 8, 2000) and Acid Rain Permit 2260-00007-IV0 (March 2, 2001) were also issued to the complex.

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emission Inventory Questionnaire were submitted by Louisiana Generating, LLC on May 24, 2006, requesting a Part 70 operating permit renewal with a major modification. Additional information dated September 22, 2006, and March 15, 2007, was also received.

Project

Big Cajun 1 Power Plant (Steam) is an electric generating plant located in New Roads, LA. The facility proposes to dismantle two existing gas-fired boilers named Boiler #1 and Boiler #2. In addition, Big Cajun I Power Plant proposes to construct and operate a new circulating fluidized bed (CFB) boiler and associated fuel handling equipment. This will be done such that the existing gas-fired boilers will not be simultaneously operational with the CFB boiler.

The CFB boiler will be designed to fire petroleum coke, coal, bagasse, and non-chemically treated wood products, with a maximum heat input rate of 2,330 MMBTU/hr. In a CFB boiler, solid fuel and a sorbent (typically limestone) are jointly fed directly to the combustion chamber. Primary air is injected from the bottom of the combustion chamber to provide combustion air as well as to fluidize the burning bed. Fluidization of the bed allows for high heat transfer rates at relatively low combustion temperatures. Because of the turbulence and velocity in the circulating bed, the fuel mixes with the bed material quickly and uniformly. Secondary air is introduced at various levels to ensure solids circulation, provide staged combustion for NOx reduction as well as control of carbon monoxide (CO) and volatile organic compounds (VOCs), and supply air for continuous combustion in the upper part of the combustion chamber.

As fuel is added to the CFB boiler it is quickly heated above its ignition point, ignites and becomes part of the burning bed. The fuel particles are entrained within the bed until they are consumed or removed in either the gas stream or with the bed ash. Entrainment of the fuel particles in the gas stream occurs when

their size is in the range where the terminal and gas velocities are equal. As the fuel particle size decreases to the point that the terminal velocity is exceeded by the gas velocity, the particles are blown from the bed, collected by a particle separator, and returned to the boiler.

During Phase I of this project, the CFB Boiler (EQT 1) and the supporting equipment will be constructed. Boiler #1 and Boiler #2 (EQT 10 and EQT 11) will be fully operational in accordance with terns and conditions of this permit.

Phase II of this project will begin on the date that the CFB Boiler (EQT 1) begins commercial operation. On this date, Boiler #1 and Boiler #2 (EQT 10 and EQT 11) will cease all operations. Boiler #1 and Boiler #2 will then be decommissioned and dismantled. At no time will Boiler #1 and/or Boiler #2 and the CFB Boiler be operated concurrently.

Section 6 of the Permit Application, dated May 24, 2006, lists the permitted emission rate before and after the project (in tons per year) for each emission point in the permit. These changes are summarized in the Permitted Air Emissions Section.

With this modification, Big Cajun 1 Power Plant (Steam) proposes to:

- Construct and operate a CFB Boiler (EQT 1)
- Construct and operate numerous associated material handling equipment
- Remove from the site two existing natural gas fired boilers (EQT 10 and EQT 11). These boilers will be decommissioned once the CFB Boiler (EQT 1) achieves commercial operation. These existing natural gas boilers will not be operated simultaneously with the CFB boiler under any circumstances.

Proposed Permits

Permit 2260-00007-V1 will be the Part 70 operating permit renewal of Part 70 operating permit 2260-00007-V0 for the Big Cajun I Power Plant. Permit 2260-00007-IV1 will be the Part 70 operating permit renewal of Acid Rain permit 2260-00007-IV0 for the Big Cajun I Power Plant. Permit PSD-LA-660(M-1) will be a major modification of Permit PSD-LA-660 for the Big Cajun I Power Plant.

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Permitted Air Emissions

Estimated emissions in tons per year are as follows:

The emissions shown in the following table indicates the emissions associated with Phase I. Phase I encompasses the time between the date of issuance of this permit and the date that the CFB Boiler (EQT 1) begins commercial operation. Phase I emissions increases and decreases are strictly due to use of updated emission factors. For sulfur dioxide, the emissions change is due to the fact that sulfur dioxide emissions that result from the combustion of fuel oil were not represented in the previous permit. No physical changes or changes in the method of operation are associated with Phase I emissions increases or decreases.

Pollutant	Before	Phase I Emissions	Change
PM_{10}	149.95	258.92	+ 108.97
SO_2	6.10	5048.22	+ 5042.12
NO_X	3365.36	3504.45	+ 139.09
CO	733.92	771.61	+ 37.69
VOC	43.72	43.52	- 0.20

The emissions shown in the following table indicates the emissions associated with Phase II. Phase II encompasses the time between the date that the CFB Boiler (EQT 1) begins commercial operation and the date of issuance of the renewal of the draft permit. The carbon monoxide total for Phase II reflects the BACT limitation of 0.15 lb CO/MMBTU that applies to the CFB Boiler (EQT 1) during the start-up and shut-down of the boiler. This is also reflected in the carbon monoxide emission limitation of 973.69 tons per year shown in the table entitled "Emission Rates for Criteria Pollutants", which is located within the draft permit.

Pollutant	Phase I Emissions	Phase II Emissions	Change
PM_{10}	258.92	223.23	- 35.69
SO_2	3504.45	1030.85	- 2473.60
NO_X	5048.22	1460.68	- 3587.54
CO	771.61	1225.50	+ 453.89
VOC	43.52	55.06	+ 11.54

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IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

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IV. Applicability and Exemptions of Selected Subject Items		
ID No:	Requirement	Notes
GRP 3	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.Chapter 51]	EXEMPT. Electric utility steam generating units are exempt from the requirements of Subchapter A of LAC 33:III.Chapter 51. [LAC 33:III.5105.B.2]
EQTs 2 - 4	Emission Standards for Sulfur Dioxide [LAC 33:III.1503]	EXEMPT. Units emit less than 250 tons of SO_2 per year. [LAC 33:III.1503.C]
EQT 2 EQT 3	Control of Emissions of Nitrogen Oxides [LAC 33:III.2201]	EXEMPT. These sources are required to comply with the more stringent NOx emissions limitation of 40 CFR 60, Subpart GG. [LAC 33:III.2201.C.15]
EQT 5 EQT 6	NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984. [40 CFR 60.110b]	DOES NOT APPLY. Storage tanks have a storage capacity of less than 75 cubic meters. [40 CFR 60.110b(a)]
EQT 8 EQT 9	NESHAP Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers [40 CFR 63, Subpart Q]	DOES NOT APPLY. Cooling towers are not operated with chromium-water based treatment chemicals. [40 CFR 63.400(a)]
EQT 10 EQT 11	Control of Emissions of Nitrogen Oxides [LAC 33:III.2201]	EXEMPT. Units are operated less than 400 hours during the ozone season. [LAC 33:III.2201.H.12]
FUG 1	Fugitive Emission Control for Ozone Nonattainment Areas and Specified Parishes [LAC 33:III.2122]	DOES NOT APPLY. This facility is not listed as an affected facility. [LAC33:III.2122.A.1]

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Prevention of Significant Deterioration/Nonattainment Review

Louisiana Generating, LLC proposes a major modification at the Big Cajun I Power Plant which will trigger Prevention of Significant Deterioration analysis. The Big Cajun I Power Plant currently operates using the limits determined as BACT in PSD-LA-660. The modification authorizes Big Cajun I to construct and operate the new circulating fluidized bed (CFB) boiler, EQT 1, CFB-1 – CFB Boiler, using petroleum coke, coal, bagasse, and non-chemically treated wood products, with a maximum heat input rate of 2,330 MMBTU/hr, as fuel. The necessary material handling sources, including fuel delivery, fuel conveyance, ash handling, and limestone handling, will also be installed at the Big Cajun I Power Plant.

After the expansion project is complete, the permittee will operate under the new limits in PSD-LA-670(M-1). Permit No. PSD-LA-670(M-1) details the project and also presents a BACT analysis and an analysis of the source's impact on total air quality to ensure compliance with the National Ambient Air Quality Standards (NAAQS) and Ambient Air Standards for the affected equipment.

Estimated emission increases due to the project in tons per year are as follows:

Pollutant	Emission Rate Increase	PSD de Minimus	Review Required
PM_{10}	112.40	15	Yes
SO_2	1458.00	40	Yes
NO_x	680.00	40	Yes
CO	972.00	100	Yes
VOC	45.70	40	Yes
Sulfuric acid	13.60	7	Yes

The modifications associated with the project result in a significant net emissions increase of the following pollutants: Particulate Matter (PM/PM_{10}), Sulfur Dioxide (SO_2), Nitrogen Oxides (NO_X), Carbon Monoxide (CO), Volatile Organic Compound (VOC), and Sulfuric Acid (H_2SO_4). Therefore, PSD requirements, including Best Available Control Technology (BACT), apply. The selection of BACT was based on a 'top down' approach; a more thorough discussion of the BACT selection process can be found in proposed permit PSD-LA-660(M-1).

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The emission rates that reflect BACT for the various sources located at this facility are represented in the following table:

MAXIMUM ALLOWABLE EMISSIONS RATES

ID No.	Description		PM_{10}	SO_2	NO_X	CO	VOC	H_2SO_4
EQT 1	CFB Boiler (CFB-1)	lb/MM Btu	0.011 †0.015	0.15 †0.20	0.07 †0.15	0.10 †*0.15	0.0047 †0.0070	0.0012 -
		lb/hr	25.60	383.00 *1877.80	179.00 *249.60	255.00 *332.90	12.00 -	3.110 -
		TPY	107.00	1458.00	680.00	973.69	45.70	13.600
EQT 2	Combustion Turbine Generator #1 (CTG-1)	***ppm(v)	-	-	23	**25	-	-
		lb/hr	-	-	171.40	102.80	-	-
		TPY	-	-	175.40	125.90	-	-
EQT 3	Combustion Turbine Generator #2 (CTG-2)	***ppm(v)	-	-	23	**25	-	-
		lb/hr	-	-	171.40	102.80	-	-
		TPY	-	-	175.40	125.90	-	-
FUG 1	Transfer Point – Emergency Pile Handling (FUG1)	lb/hr	0.80	-	-	-	-	-
		TPY	0.03					
FUG 2	Material Handling – Outside Conveyors (FUG2)	lb/hr	1.88	-	-	-	-	-
		TPY	1.42					
FUG 3	Emergency Pile Wind Erosion (FUG3)	lb/hr	1.48	-	-	-	-	-
		TPY	1.48					
FUG 4	Fugitive Dust from Paved Roads (FUG4)	lb/hr	1.21	-	-	-	-	-
		TPY	3.54					
FUG 5	Transfer Point – Barge Unloader (TP1)	lb/hr	0.13	-	-	-	-	-
		TPY	0.03					
FUG 6	Transfer Point – Unloading Hopper to Conveyor C-1 (TP2)	lb/hr	0.13	-	-	-	-	-
		TPY	0.03					
FUG 7	Transfer Point – Conveyor C-1 to Conveyor C-2 (TP3)	lb/hr	0.13	-	-	-	-	-
		TPY	0.03					
FUG 8	Transfer House 1 – Conveyor C-2 to Conveyor C-3 or C-4 (TP4)	lb/hr	0.06	-	-	-	-	-
		TPY	0.03					
FUG 9	Limestone Storage Dome – Dust Collection System (TP5)	lb/hr	0.01	-	-	-	-	-
		TPY	0.01					
FUG 10	Fuel Storage Dome – Dust Collection System (TP6)	lb/hr	0.01	-	-	-	-	-
		TPY	0.01					
FUG 11	Fuel Crusher House – Dust Collection System (TP7)	lb/hr	0.04	-	-	-	-	-
		TPY	0.06					
FUG 12	Fuel Silos – Dust Collection System (TP8)	lb/hr	0.002	-	-	-	-	-
		TPY	0.003					

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FUG 13	Limestone Transfer Tower – Conveyor C-9 to Conveyor C-10 (TP9)	lb/hr TPY	0.01 0.01	-	-	-	-	-
FUG 14	Limestone Silo and Crusher – Dust Collection System (TP10)	lb/hr TPY	0.02 0.02	-	-	-	-	-
FUG 15	Ash Silo – Dust Collection System (TP11)	lb/hr TPY	< 0.001 0.002	-	-	-	-	-
FUG 16	Ash Truck Loading (TP12)	lb/hr TPY	0.18 0.25	-	-	-	-	-
FUG 17	Lime Silo – Dust Collection System (TP13)	lb/hr TPY	0.22 0.01	-	-	-	-	-

†Applies only during the first 12 months of operation, unless otherwise noted.
*Applies when unit operates at less than 60 percent of its maximum heat input of 2,330 MMBTU/hr.
**Applies when unit operates at greater than or equal to 75 percent of rated load.
***All ppm(v) measurements are corrected to 15% oxygen.

Neither the proposal nor the general commercial, residential, industrial, or other growth associated with it is expected to have a significant adverse impact on soil, vegetation, visibility, or air quality in the area of the facility or any Class I area.

Streamlined Equipment Leak Monitoring Program

Unit or Plant Site	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
Big Cajun I Power Plant	None	NA	NA

MACT Requirements

Big Cajun I Power Plant is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51. However, electric utility steam generating units are exempt from the requirements of LAC 33:III.Chapter 51 per LAC 33:III.5105.B.2.

The Big Cajun I Power Plant is subject to the following NSPS and NESHAP regulations:

- NSPS – Subpart D – Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971
- NSPS – Subpart Da – Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978
- NSPS – Subpart Y – Standards of Performance for Coal Preparation Plants
- NSPS – Subpart GG - Standards of Performance for Stationary Gas Turbines
- NSPS – Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants

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- NSPS – Subpart HHHH – Emission Guidelines and Compliance Times for Coal-Fired Electric Steam Generating Units
- NESHAP – Subpart M - National Emission Standard for Asbestos
- NESHAP – Subpart DDDDD - Industrial, Commercial, and Institutional Boilers and Process Heaters

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Air Quality Analysis

Air quality modeling was performed for PM_{10}, CO, SO_2, and NO_x in order to determine compliance with the National Ambient Air Quality Standards (NAAQS) and the Class II PSD Increment. Modeling results showed compliance with all applicable standards for PM_{10}, CO, SO_2, and NO_x.

Pollutant	Averaging Period	Preliminary Screening Concentration ($\mu g/m^3$)	Level of Significant Impact ($\mu g/m^3$)	Significant Monitoring Concentration ($\mu g/m^3$)	Background ($\mu g/m^3$)	Maximum Modeled Concentration ($\mu g/m^3$)	Modeled + Background Concentration ($\mu g/m^3$)	NAAQS ($\mu g/m^3$)	Modeled PSD Increment Consumption ($\mu g/m^3$)	Allowable Class II PSD Increment ($\mu g/m^3$)
PM_{10}	24-hour	8.29	5	10	75	39.4	114.4	150	13.7	30
SO_2	3-hour	39.43	25	-	566.6	410.6	977.2	1300	142.3	512
	24-hour	11.65	5	13	172.9	122.3	295.2	365	40.6	91
	Annual	0.67	1	-	NR	NR	NR	80	NR	20
NO_X	Annual	0.38	1	14	NR	NR	NR	100	NR	25
CO	1-hour	46.66	2000	-	NR	NR	NR	40,000	NR	-
	8-hour	17.96	500	575	NR	NR	NR	10,000	NR	-
NR = Not required										

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A Class I area impact analysis was performed to determined the affect of this proposed project on the Breton National Wildlife Area, which is the nearest Class I area. This Class I area is located approximately 250 kilometers from the Big Cajun I Power Plant.

The Class I area impact analysis included air quality impact, deposition impact, and visibility impairment analyses. The results of these analyses showed an insignificant impact on air quality. None of the modeled pollutants exceeded their respective significance impact levels. The deposition flux was estimated to be below significant threshold levels for both nitrogen and sulfur. The visibility impairment was modeled to be less than five (5) percent in all 24-hour periods. As a result of this analysis, there was no predicted adverse impact on air quality or visibility and no adverse impact as a result of deposition.

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

A permit shield per 40 CFR 60.6(f) and LAC 33:III.507.I is not included in the proposed permits.

VI. PERIODIC MONITORING

Big Cajun I Power Plant will perform all of the monitoring requirements of 40 CFR 60, Subpart Da for the CFB Boiler (EQT 1).

Big Cajun I Power Plant will perform all of the monitoring requirements of 40 CFR 60, Subpart GG for the Combustion Turbine Generator #1 (EQT 2) and Combustion Generator #2 (EQT 3).

Big Cajun I Power Plant will perform all of the monitoring requirements of 40 CFR 60, Subpart Y for the following sources: Transfer Point – Emergency Pile Material Handling (FUG 1), Transfer Point – Barge Unloader (FUG 5), Transfer Point – Unloading Hopper to Conveyor C-1 (FUG 6), Transfer Point – Conveyor C-1 to Conveyor C-2 (FUG 7), Transfer House 1 – Conveyor C-2 to Conveyor C-3 or C-4 (FUG 8), Fuel Storage Dome – Dust Collection System (FUG 10), Fuel

Storage Dome – Dust Collection System (FUG 11), and Fuel Silos – Dust Collection System (FUG 12).

Big Cajun I Power Plant will perform all of the monitoring requirements of 40 CFR 60, Subpart OOO for the following sources: Transfer Point – Barge Unloader (FUG 5), Transfer Point – Unloading Hopper to Conveyor C-1 (FUG 6), Transfer Point – Conveyor C-1 to Conveyor C-2 (FUG 7), Transfer House 1 – Conveyor C-2 to Conveyor C-3 or C-4 (FUG 8), Limestone Storage Dome – Dust Collection System (FUG 10), Limestone Transfer Tower – Conveyor C-9 to Conveyor C-10 (FUG 13), Limestone Silo and Crusher – Dust Collection System (FUG 14), and Lime Silo – Dust Collection System (FUG 17).

Federal regulation 40 CFR 64-Compliance Assurance Monitoring is applicable to this facility. The following emission source with pollution control equipment has a pre-control emission rate of a pollutant over 100 tons per year and was determined to require a CAM Plan: CFB-1 – CFB Boiler.

The baghouse serves to collect and reduce particulate emissions associated with the combustion of coal and petroleum coke. The monitoring of the differential pressure across the baghouse in addition to the monitoring of the readings from the continuous opacity monitoring system (COMS) ensures that particulate emissions are being controlled.

Big Cajun I Power Plant will conduct performance tests to determine the appropriate ranges that assure compliance with the particulate matter emission rates within ninety (90) days of initial startup of each CFB Boiler. Within ninety (90) days of the completion of the performance test, Big Cajun I Power Plant will submit a revised CAM Plan that incorporates these indicator ranges to LDEQ for approval and, upon submittal, begin to operate under the proposed CAM Plan.

Once LDEQ approves the CAM Plan, Big Cajun I Power Plant will file a permit modification with the LDEQ Air Permits Division to incorporate the specifics of the plan, including the indicator ranges determined during the performance test, into the Title V permit within 180 days of the commencement of commercial operation of the CFB Boilers.

A federally enforceable condition requires the permittee to limit the annual throughput of each of the following sources to 2,700,000 tons per year: Transfer Point – Barge Unloader (FUG 5), Transfer Point – Unloading Hopper to Conveyor C-1 (FUG 6), Transfer Point – Conveyor C-1 to Conveyor C-2 (FUG 7), Transfer House 1 – Conveyor C-2 to Conveyor C-3 or C-4 (FUG 8). A federally enforceable condition requires the permittee to limit the annual throughput of Limestone Transfer Tower – Conveyor C-9 to Conveyor C-10 (FUG 13) to 500,000 tons per year. A federally enforceable condition requires the permittee to limit the annual throughput of Lime Silo – Dust Collection System (FUG 17) to 1,040 tons per year. The combined total throughput shall be recorded each month, as well as the throughput for the last twelve months. These records shall be kept on site and available for inspection by the Office of Environmental Compliance, Surveillance Division. A total annual throughput above the maximum listed in this specific condition for any twelve consecutive month period shall be a violation of this permit and must be reported to the Office of Environmental Compliance, Enforcement Division. A report showing the total

throughput for the preceding calendar year shall be submitted to the Office of Environmental Compliance, Enforcement Division by March 31.

The permittee shall daily monitor the baghouse for visible emissions from the following sources: Limestone Storage Dome – Dust Collection System (FUG 9), Fuel Storage Dome – Dust Collection System (FUG 10), Fuel Storage Dome – Dust Collection System (FUG 11), Fuel Silos – Dust Collection System (FUG 12), Limestone Silo and Crusher – Dust Collection system (FUG 14), Ash Silo – Dust Collection System (FUG 15), and Lime Silo – Dust Collection System (FUG 17). The filter elements shall be inspected upon each occurrence of process unit shut down or whenever visible emission checks indicate maintenance may be necessary. Elements shall be changed as necessary. The permittee shall keep records of visible checks and maintenance inspections on site and available for inspection by the Office of Environmental Compliance, Surveillance Division.

Louisiana Generating, LLC, and Big Cajun I Power Plant, shall comply with the monitoring requirements as provided in 40 CFR Part 75 and according to according to Permit No. 2260-00007-IV1, for the following sources: CFB Boiler (EQT 1), Combustion Turbine Generator #1 (EQT 2), Combustion Turbine Generator #2 (EQT 3), Boiler 1 (EQT 10), and Boiler 2 (EQT 11). The emissions measurements recorded and reported in accordance with 40 CFR Part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for SO_2 and NO_X under the Acid Rain Program. The requirements of 40 CFR Part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

Big Cajun I Power Plant will monitor the fuel firing rate of each fuel fired in the CFB Boiler (EQT 1). These rates will be recorded and maintained on site for inspection by DEQ personnel.

Big Cajun I Power Plant will ensure compliance with the opacity and particulate matter emission limits for the combustion turbines (EQT 2 and EQT 3), Boiler 1 (EQT 10) and Boiler 2 (EQT 11) by visually inspecting the source for visible emissions on a weekly basis. If visible emissions are detected, Big Cajun I Power Plant will conduct a six-minute opacity test in accordance with EPA Reference Method 9.

Big Cajun I Power Plant will install and maintain a continuous emissions monitoring system in order to monitor NOx emissions from the combustion turbines (EQT 2 and EQT 3), Boiler 1 (EQT 10) and Boiler 2 (EQT 11).

Big Cajun I Power Plant will monitor and keep records of the sulfur content of any No. 2 fuel oil fired by Boiler 1 or Boiler 2 (EQT 10 and EQT 11) to determine that it is less than 0.7% sulfur.

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

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Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: $\geq$ 10 tons per year of any toxic air pollutant; $\geq$ 25 tons of total toxic air pollutants; and $\geq$ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Louisiana Generating, LLC
Big Cajun 1 Power Plant (Steam)
Jarreau, Pointe Coupee Parish, Louisiana
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Sulfur Dioxide (SO_2) – An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.